Supplementary Material

The anti-inflammatory effect of dimethyl trisulfide in experimental acute pancreatitis

Erik Márk Orján[1], Eszter Sára Kormányos[1], Gabriella Mihalekné Fűr[1], Ágnes Dombi[2], Emese Réka Bálint[1], Zsolt Balla[1], Beáta Adél Balogh[1], Ágnes Dágó[1], Ahmad Totonji[1], Zoárd István Bátai[2], Gábor Pozsgai[2], Erika Pintér[2], Zoltán Rakonczay Jr[1#], Lóránd Kiss[1#]

Supplemetary figures

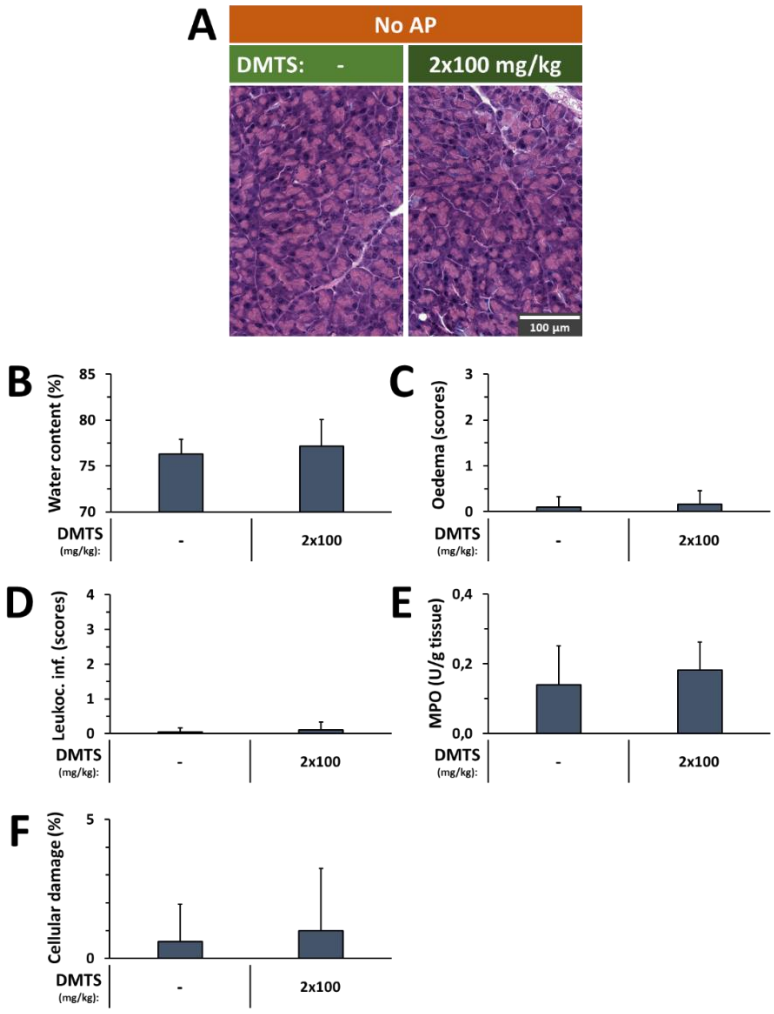

Figure S1. *Two times DMTS treatment alone had no effect compared to vehicle treated animals. Mice were treated with 2x100 mg/kg DMTS subcutaneously (s.c.). Control animals received vehicle instead of DMTS. Animals were sacrificed at 12 h after physiological saline injection. (A) Representative histopathological images of pancreatic tissues of the treatment groups. Bar charts show the extent of pancreatic (B) water content, (C) oedema, (D) leukocyte infiltration, (E) myeloperoxidase (MPO) activity, and (F) cellular damage. Values represent means with standard deviation. The total animal number was 12, for details of exact means, SDs and animals per group please see the supplementary table 1. Independent Samples T-Test was performed. Abbreviation: Leukoc. inf., leukocyte infiltration.*

Supplementary Material

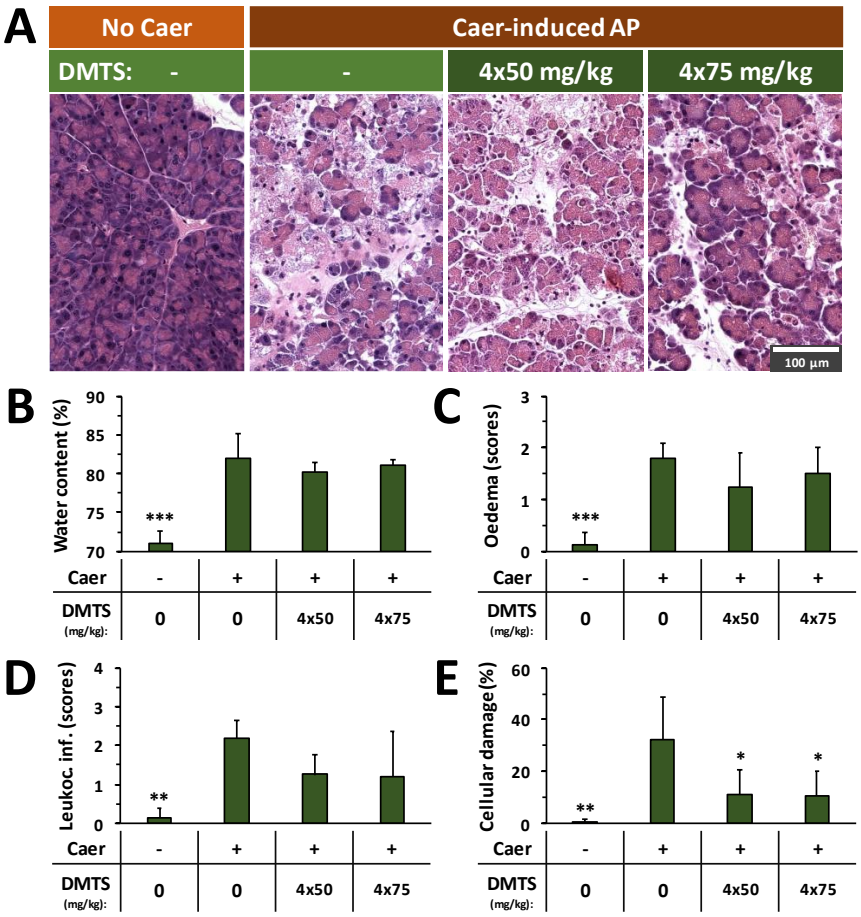

Figure S2. *DMTS administration for four times reduces the severity of Caer-induced necrotizing AP in mice. Animals were treated with 4x50 or 4x75 mg/kg DMTS s.c., while i.p. injection with 10x50 µg/kg Caer was used to induce AP. Control animals received physiological saline instead of Caer and vehicle instead of DMTS. Animals were sacrificed at 12 h after Caer or physiological saline injection. (A) Representative histopathological images of pancreatic tissues of the treatment groups. Bar charts show the extent of pancreatic (B) water content (as measured by the dry-wet weight ratio), (C) oedema (evaluation of histological sections), (D) leukocyte infiltration, and (E) cellular damage. Values represent means with standard deviation, The total animal number was 24, for details of exact means, SDs and animals per group please see the supplementary table 1. One-way ANOVA was performed followed by the Dunnett's post hoc test where all of the groups were compared to AP only group, *p<0.05; **p<0.01; ***p<0.001.*

Supplementary Material

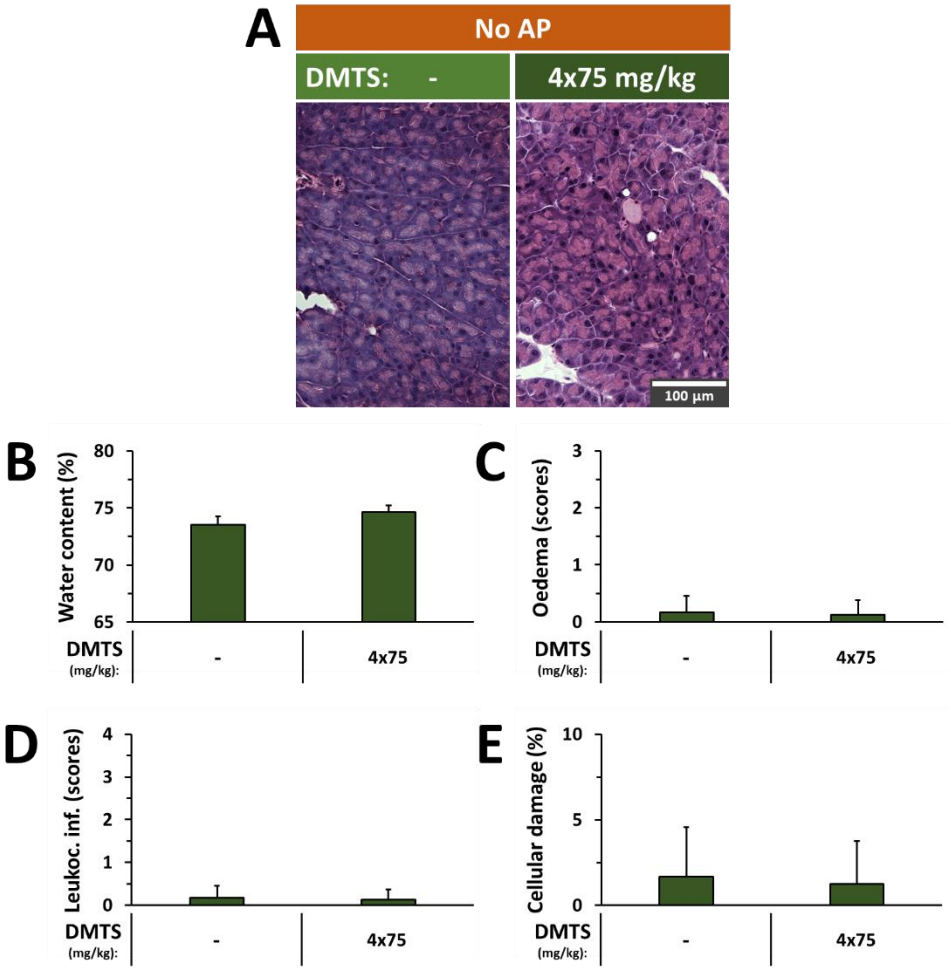

Figure S3. *Four times DMTS treatment alone had no effect compared to vehicle treated animals. Mice were treated with 2x100 mg/kg DMTS s.c.. Control animals received physiological saline instead of DMTS. Animals were sacrificed at 12 h after physiological saline injection. (A) Representative histopathological images of pancreatic tissues of the treatment groups. Bar charts show the extent of pancreatic (B) water content, (C) oedema, (D) leukocyte infiltration, and (E) cellular damage. Values represent means with standard deviation. The total animal number was 12, for details of exact means, SDs and animals per group please see the supplementary table 1. Independent Samples T-Test was performed.*

Supplementary Material

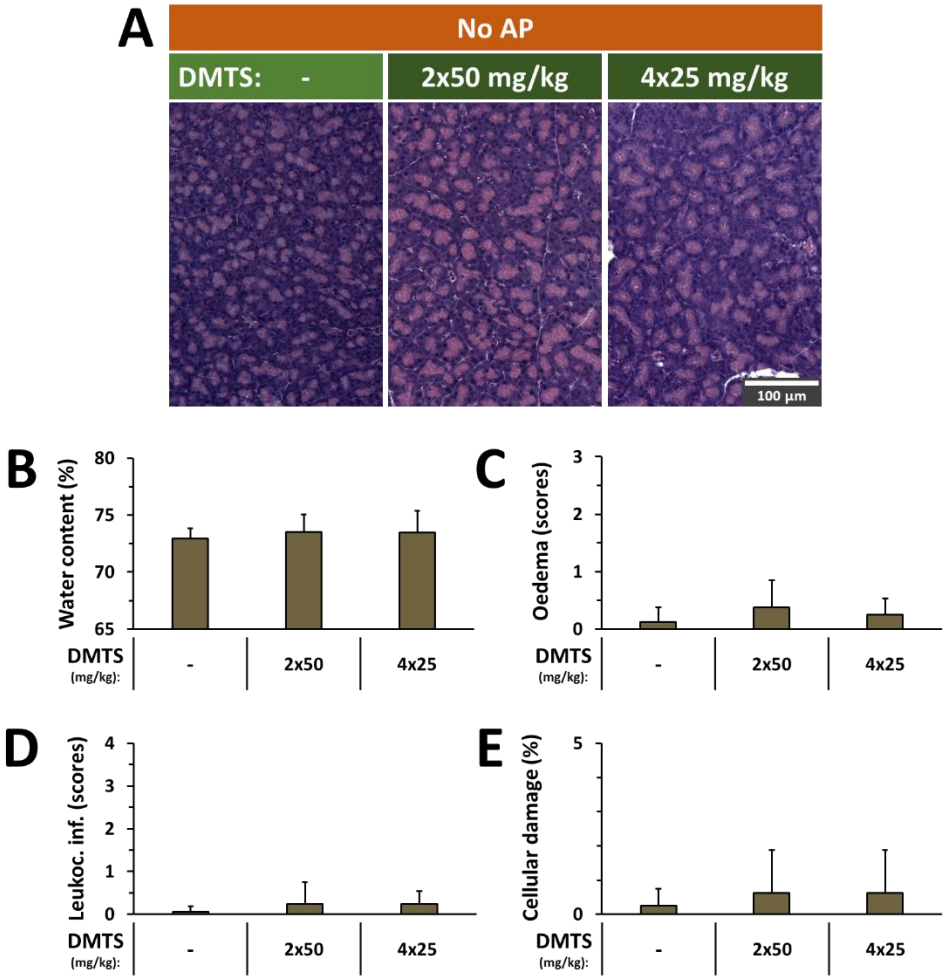

Figure S4. *DMTS treatment alone had no effect compared to vehicle treated animals. Rats were treated with 2x50 or 4x25 mg/kg DMTS s.c.. Control animals received physiological saline instead of DMTS. Animals were sacrificed at 24 h after physiological saline injection. (A) Representative histopathological images of pancreatic tissues of the treatment groups. Bar charts show the extent of pancreatic (B) water content, (C) oedema, (D) leukocyte infiltration, and (E) cellular damage. Values represent means with standard deviation. The total animal number was 18, for details of exact means, SDs and animals per group please see the supplementary table 1. Independent. One-way ANOVA was performed.*

Supplementary Material

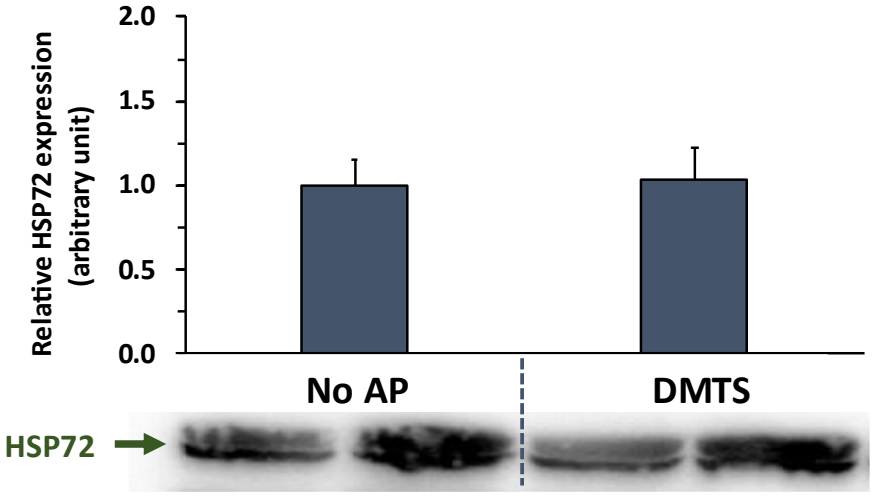

Figure S5. *Changes in heat shock protein 72 (HSP72) levels during treatments with or without DMTS in mice without AP. Representative Western blot image of pancreatic HSP72 levels, and the densitometry of Western Blot images for pancreatic HSP72 level. Values represent means with standard deviation. The total animal number was 8, for details of exact means, SDs and animals per group please see the supplementary table 1. One-way ANOVA was performed followed by Tukey post hoc test.*

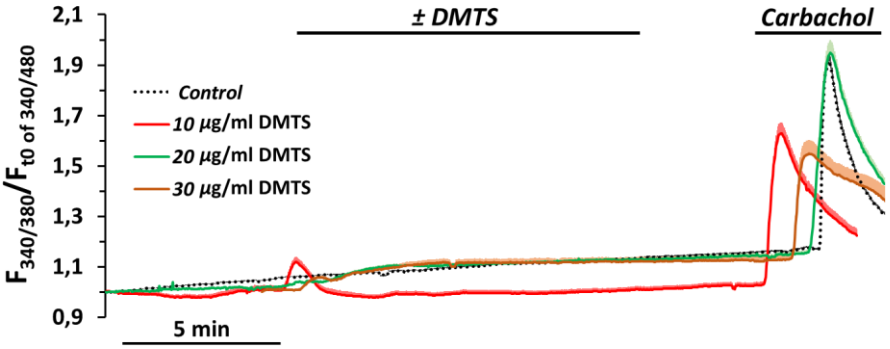

Figure S6. *The effects of DMTS on intracellular Ca^{2+} concentrations measured on isolated mouse pancreatic acinar cells. Representative traces of different DMTS treatments are shown. Cells were perfused with standard HEPES solution and treated with 10, 20 or 30 µg/ml DMTS and 100 µM carbachol.*

Supplementary Material

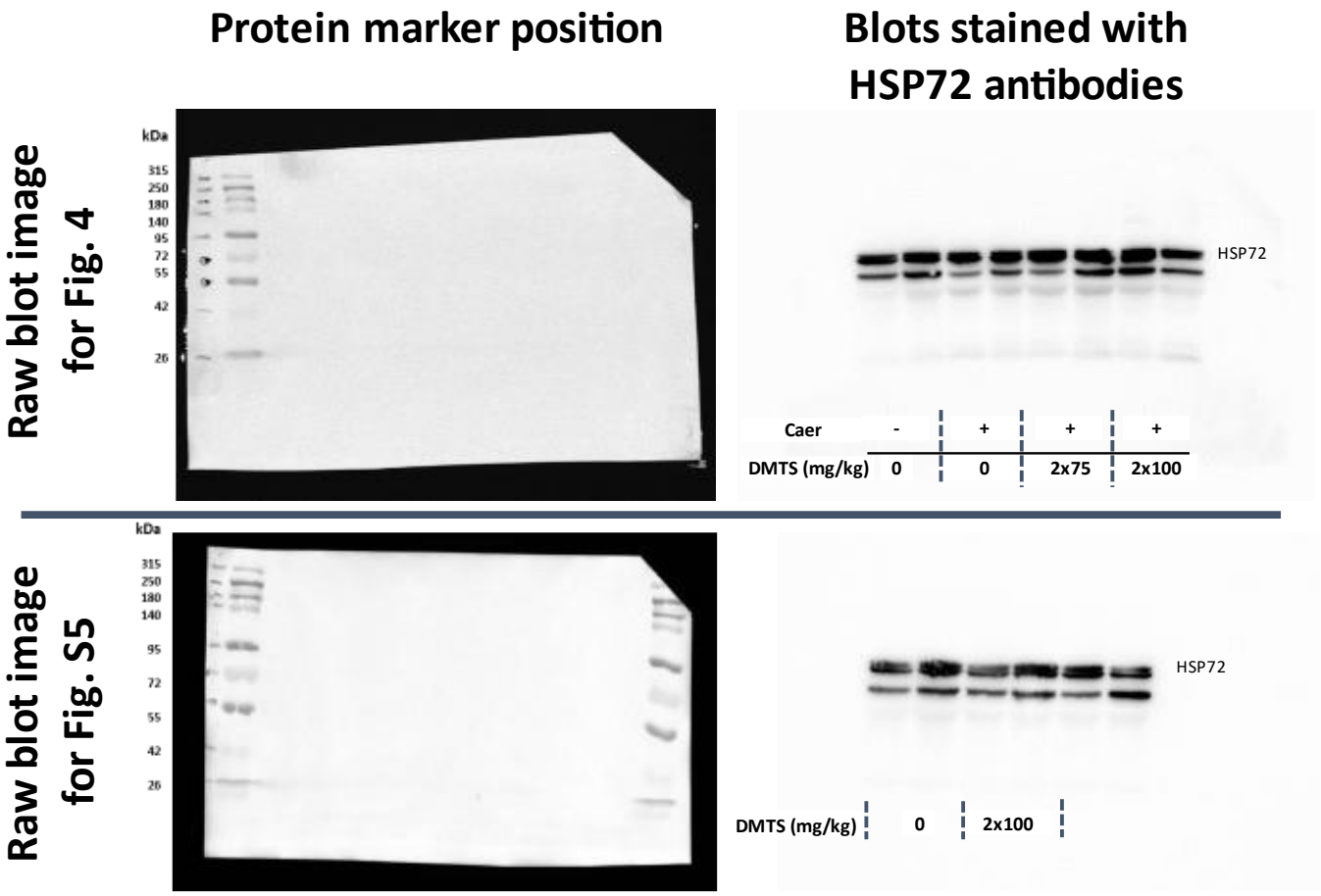

Figure S7. *Original full-length blots. All samples derive from the same experiment and all blots were processed in parallel.*